

CLAIMS

1. Use of a neurotrophic factor expression system for the preparation of a pharmaceutical composition intended for the treatment of ALS by  
5 systemic administration.

2. Use according to claim 1, characterized in that the expression system comprises an expression cassette composed of a nucleic acid coding for a neurotrophic factor under the control of a  
10 transcriptional promoter.

3. Use according to claim 1, characterized in that the expression system comprises two expression cassettes each composed of a nucleic acid each coding for a different neurotrophic factor, under the control  
15 of a transcriptional promoter.

4. Use according to claim 1, characterized in that the expression system comprises an expression cassette composed of two nucleic acids coding for a different neurotrophic factor, under the control of a  
20 unique transcriptional promoter (bicistronic unit).

5. Use according to claim 2, characterized in that the neurotrophic factor is chosen from among GDNF, CNTF, BDNF and NT3.

6. Use according to claim 3 or 4,  
25 characterized in that each nucleic acid codes for a different neurotrophic factor chosen from among GDNF, CNTF, BDNF and NT3.

7. Use according to claim 6, characterized

in that the expression system comprises a nucleic acid coding for CNTF and a nucleic acid coding for GDNF.

8. Use according to one of claims 2 to 4, characterized in that the expression cassettes are part  
5 of a vector.

9. Use according to claim 8, characterized in that the expression cassettes are part of a plasmid vector.

10. Use according to claim 8, characterized  
10 in that the expression cassettes are part of a viral vector.

11. Use according to claim 10, characterized in that the viral vector is an adenoviral vector.

12. Use according to one of the preceding  
15 claims, characterized in that [lacuna] promoter is a constitutive eucaryotic or viral promoter.

13. Use according to one of the preceding claims, characterized in that the systemic administration is an intravenous administration.

20 14. Pharmaceutical composition intended for the treatment of degenerative diseases of the motor neurones comprising a system allowing the expression of two neurotrophic factors.

15. Composition according to claim 14,  
25 characterized in that the said system comprises two gene-transfer vector each carrying a nucleic acid coding for a different neurotrophic factor.

16. Composition according to claim 14,

characterized in that the said system comprises a gene-transfer vector carrying a cassette allowing the concomitant expression of two different neurotrophic factors.

5                   17. Composition according to claim 15 or 16, characterized in that the vectors are viral vectors.

                  18. Composition according to claim 17, characterized in that the vectors are adenoviruses.

                  19. Composition according to claim 15 or 16,  
10 characterized in that the vectors are plasmid vectors.

                  20. Composition according to claim 14, characterized in that the neurotrophic factors are chosen from among GDNF, BDNF, CNTF and NT3.

                  21. Composition according to claim 20,  
15 characterized in that it contains two defective recombinant adenoviruses, one carrying a nucleic acid coding for CNTF and the other for GDNF.

                  22. Composition according to claim 20,  
characterized in that it contains two defective  
20 recombinant adenoviruses, one carrying a nucleic acid coding for GDNF and the other for NT3.

                  23. Composition according to claim 20,  
characterized in that it contains two defective  
recombinant adenoviruses, one carrying a nucleic acid  
25 coding for BDNF and the other for NT3.

                  24. Composition according to claim 14, characterized in that it is injected intravenously.

                  25. Pharmaceutical composition comprising a

neurotrophic factor expression system and riluzole, for simultaneous administration or administration at intervals of time.